



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,529	06/26/2003	Su Il Choi	5895P038	5763

8791 7590 01/24/2007
BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER

AZEMAR, GUERSSY

ART UNIT	PAPER NUMBER
----------	--------------

2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/606,529

Applicant(s)

CHOI ET AL.

Examiner

Guerssy Azemar

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-7 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 06/26/2003
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 7 is objected to because of the following informalities:

- (1) The examiner suggests rewriting the claim as follows: "A computer readable medium **for storing instructions, which when performed enables a computer to**".

- (2) The examiner also suggests amending the claim to include in the first sentence: " a first step of, upon receipt of a control message for upstream report, checking **which of a plurality of ONU's**".

- (3) The examiner suggests amending the claim to include the definition of words like HP, MP, or LP as follows "HP (**high priority**), MP (**medium priority**), LP (**low priority**)".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Haran et al. (20050249497).

Haran et al. teach a bandwidth allocation device for an Ethernet Passive Optical Network (EPON) (page 1, paragraph 0004) including an optical line termination (OLT) (page 1, paragraph 0004), an optical distribution network (ODN) (always included in EPON, it connects the OLT to the ONUs), and a plurality of optical network units (ONU) (page 1, paragraph 0004), wherein the optical line termination includes a Multi-Point Control Protocol (MPCP) allocator, and the optical network unit includes an MPCP requester (page 1, paragraph 0004, "MPCP messages" the messages contain the requests and the grants),

said MPCP allocator including:

a class-based queue state counter which differentiates the optical network unit (page 1, paragraph 0006, the prior art refers to the algorithm used to differentiate the ONUs), upon receipt of a control message for upstream report (REPORT) from a Medium Access Control (MAC) control layer (page 1, paragraph 0006, "REP"), and obtains class-based queue length information of the optical network unit (page 1, paragraph 0007, the ONU reports the sub-queue length); and

a grant generator which, when queue state information of all the optical network units is obtained through the class-based queue state counter, generates a service-

based bandwidth for each of the optical network units (depending on the priority, see paragraph 0007), and transmits a control message for upstream bandwidth allocation (page 1, paragraph 0004, "the OLT management"),

said MPCP requester including:

a class-based buffer counter which counts a class-based buffer length, upon receipt of the control message for upstream bandwidth allocation from the grant generator (the request is an upstream message, the reference teaches receiving a REP at the OLT; the reference also teaches the ONU reports in paragraph 0007); and

a request generator, which generates class-based buffer length information, and transmits the control message for upstream report containing the generated buffer length information (the ONU does report the length information through the REP, paragraphs 0006, 0007).

(2) With respect to claim 2:

Haran et al. teach the bandwidth allocation device, wherein the downstream control message as a grant of an upstream bandwidth request includes a grant level (pertaining to a specific priority level), a grant length (802 and 804 in figure 8(a)), and a start time of a timeslot as a sum of a plurality of grant values of upstream slot bandwidth (figure 6 shows the sums of the grants as they are compared to a threshold depending on their priority level, the start time is inherently included in the grant).

(3) With respect to claim 3:

Haran et al. teach the bandwidth allocation device, wherein the control message for upstream report includes a queue level (paragraph 0006 teach queue level as to

which priority level), and a queue report as a sum of a plurality of queue state reports (total bytes, page 1, paragraph 0007).

Allowable Subject Matter

5. Claims 4-6 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter: The present invention comprises a bandwidth allocation device for EPON. The bandwidth allocation is based on class and available bandwidth. The prior art teaches a method for bandwidth allocation also based on class, however, it guaranties that a length of a grant will match a count of bytes by an ONU.
7. Claim 7 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guerssy Azemar whose telephone number is (571) 270-1076. The examiner can normally be reached on Mon-Fri (every other Fridays off).

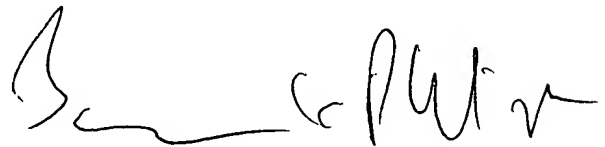
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Guerssy Azemar

01/15/2007

A handwritten signature in black ink, appearing to read 'J. K. Patel', with a stylized flourish at the end.

JAY K. PATEL
SUPERVISORY PATENT EXAMINER